

REMARKS

Claim 1 has been amended to include the recitations of claim 5, which has been canceled.

Upon entry of the Amendment, claims 1-4 and 6-9 are pending in the application.

The Examiner has acknowledged Applicants' claim for foreign priority based on a Japanese Application, JP 2003-37476, filed February 14, 2003. In accordance with 35 U.S.C. § 119(b), Applicants will file a certified copy of their foreign priority document, JP 2003-37476, in due course.

The Examiner objected to the drawings under 37 C.F.R. § 1.83(a), and requested additional drawings which show every feature of the invention specified in the claims, to include stacking faults and a non-luminous shell.

Applicants submit herewith three new sheets of drawings, Fig. 2, Fig. 3(a), and Fig. 3(b) in compliance with 37 C.F.R. § 1.84(b) and 37 C.F.R. § 1.121(d). Fig. 2 depicts a particle having a non-luminous shell, and Fig. 3(a) is a photomicrograph of particles having stacking faults. Because it is difficult to observe stacking faults from the surface in small-size particles, transmission electron micrographs of cross section of particles that show the presence of stacking faults are given in Fig. 3(b).

The new drawing sheets depict what was already claimed in the specification as originally filed, and no new matter has been entered. Additionally, the specification at page 8 has been amended to identify and describe the new drawing sheets under the heading "BRIEF DESCRIPTION OF THE DRAWINGS".

In view of the foregoing, Applicants respectfully request the Examiner to enter the new drawings and withdraw the objection.

Applicants have also amended the Title in accordance with the Examiner's suggestion, except that "LUMINESCENT" is changed to "LUMINESCENCE."

Withdrawal of the objection to the Title is requested.

Claims 1 and 3-4 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Shiiki, U.S. Patent No. 6,077,458.

Claim 1 has been amended to include the recitation of claim 5, to thereby obviate the rejection. Claim 6 has been amended to depend from claim 1. Claims 5, 10 and 11 have been canceled.

Claims 5-6 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shiiki, U.S. Patent No. 6,077,458, in view of Zovko, U.S. Publication No. 2004/0043191.

Applicants respectfully traverse for the reason that there is no motivation to combine the teachings of Shiiki and Zovko.

It is apparent from the figures and working examples in Shiiki that while the general description of Shiiki mentions electroluminescent devices, Shiiki mainly concerns the use of phosphors for electron-beam excitation, which can be used in cathode-ray tubes and the like. To the contrary, Zovko is directed to electroluminescent panels.

Even though the phosphors for electron-beam excitation and the phosphors for electroluminescence can have similar compositions, the phosphors for electron-beam excitation and the phosphors for electroluminescence differ in terms of light-emission mechanism.

In addition, the structural constructions of the devices disclosed in Shiiki and Zovko are different. For example, an organic binder, which is used in conventional electroluminescent devices, cannot be used in an electron-beam-excitation-phosphor layer. This is because an organic binder would immediately decompose in such a layer. Moreover, a transparent conductive layer (i.e., a transparent electrode) is unnecessary in a conventional system using electron-beam-excitation phosphors. Therefore, in view of these differences, one of ordinary skill would not have been motivated to combine Shiiki and Zovko. Furthermore, the combination of Shiiki and Zovko also would not result in the electroluminescent device of the present invention.

In view of the foregoing, the present invention (claim 1 as amended to incorporate therein the recitation of claim 5) is not obvious over Shiiki in view of Zovko, and withdrawal of the rejection is respectfully requested..

Claims 2 and 7-9 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shiiki, U.S. Patent No. 6,077,458 in view of Kajiwara, U.S. Patent No. 6,819,041.

Applicants traverse for the reason that there is no motivation to combine Shiiki and Kajiwara.

As discussed above, Shiiki is directed to the use of phosphors for electron-beam excitation, which can be used in cathode-ray tubes and the like.

To the contrary, Kajiwara discloses (low-speed) electron-excitation phosphors, in the technical field of so-called FED (field emission display). It is well known in the FED field that it is important to reduce the defect density of phosphors, which are to be excited by electron beams

in a vacuum, to a low level. In contrast, it is important that phosphors have many stacking faults in the present invention.

Additionally, the “faults” defined in Kajiwara concern causes of so-called defect density, and the “faults” are impurities, lattice vacancies, edge dislocations, screw dislocations, stacking faults, etc. Further, it is a common knowledge in the art of electron-excitation phosphors that a high defect density results in lower durability of the material. Therefore, one of ordinary skill would not be motivated to combine Shiiki and Kajiwara to obtain an electroluminescence device comprising phosphor particles as claimed.

In view of the foregoing, Applicants submit that the present invention is not obvious over Shiiki and Kajiwara. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

Claims 10-11 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shiiki in view of Kajiwara and further in view of Zovko.

Claims 10 and 11 have been canceled so as to render the rejection moot. As to amended claim 1 and claim 6, Applicants have addressed each of Shiiki, Kajiwara and Zovko above.

Withdrawal of all rejections and allowance of claims 1-4 and 6-9 is earnestly solicited.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/776,633

Q79763

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

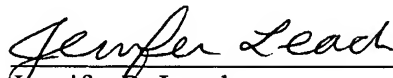
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AMENDMENTS TO THE DRAWINGS

Figs. 2-3(b) are submitted herewith. Fig. 2 is an explanatory view showing an example of a particle having a non-luminous sheet. Fig. 3(a) is a photomicrograph of particles having stacking faults. Fig. 3(b) shows transmission electron micrographs of cross sections of particles having stacking faults. These drawings are submitted pursuant to 37 C.F.R. § 1.83 and the Examiner's request for drawings which illustrate the stacking faults and non-luminous shell. No new matter has been added.

Attachment: New Sheets (Figs. 2-3(b))
Replacement Sheets (Figs. 1-3(b) including new drawings Figs. 2-3(b))



Seiji YAMASHITA Q79763
Filed: February 12, 2004 Group Art Unit 2879
Appl. No.: 10/776,633 Conf. No. 1767
Responsive to Office Action of September 8, 2005
For: Electroluminescence Device Having Phosphor
Particles Which Give Donor-Acceptor Type
Luminescence (As Amended)
New Sheet

Fig. 2

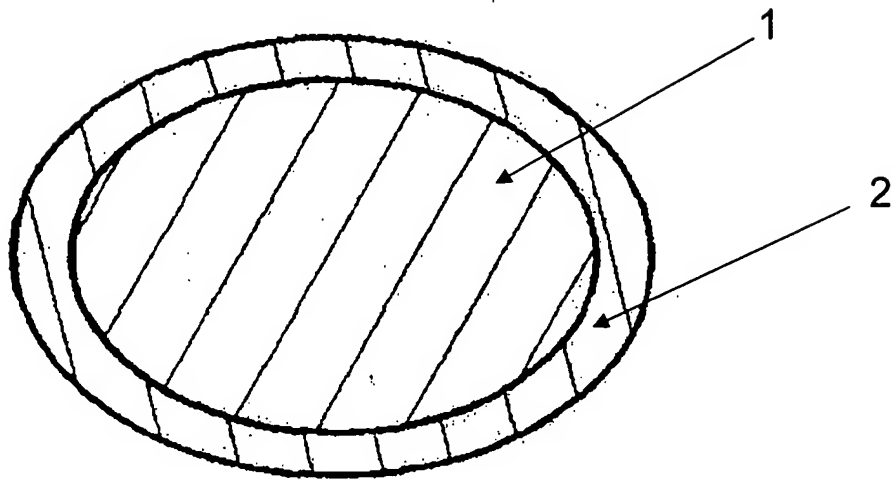
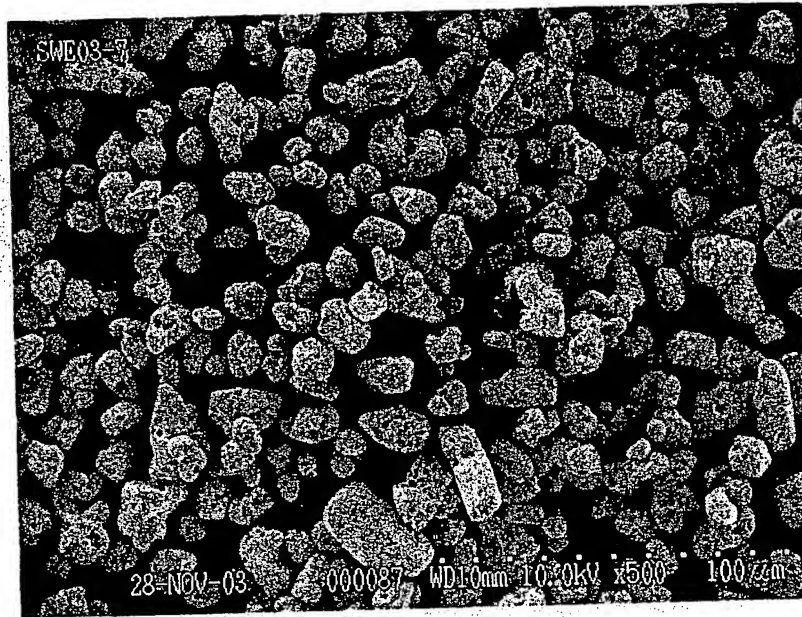


Fig. 3(a)



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Fig. 3(b)



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